

Chapter 9

Non-Tariff Measures in Thailand

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August 2019

This chapter should be cited as

Laksanapnyakul, N., P. Rattanasimanon, S. Tunmuntong, P. Yutthasaknukun and C. Intaravitak (2019), 'Non-Tariff Measures in Thailand', in Ha Thi Thanh Doan and S. Rosenow (eds.), *Non-Tariff Measures in ASEAN-An Update*. Jakarta: ERIA, pp.185–206.

NON-TARIFF MEASURES IN THAILAND

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1. Introduction

Using the United Nations Conference on Trade and Development (UNCTAD) methodology and 2018 non-tariff measure (NTM) classifications, this chapter analyses Thailand's database of NTMs implemented during 2015–2018. Beginning with an overview of the trade structure, we recap the comprehensiveness of the database and, in section 2, summarise the types of NTMs imposed and regulatory institutions involved. Section 3 discusses the incidence of NTMs by product group. Section 4 draws conclusions and recommends policies.

1.1. Overview of Thailand's Trade Structure

During the past 50 years of continuous economic growth, the structure of Thailand's economy and international trade has evolved dramatically. Once a primitive agricultural economy, Thailand developed light industry, then increasingly sophisticated heavy industry. Its development strategy changed from import-substitution industrialisation during the 1960s to export-oriented industrialisation from the 1970s. Since the start of trade and investment liberalisation, Thailand has entered into many bilateral and regional trade agreements.

Thailand is now an upper-middle-income country with an open economy and net trade surplus, and a high level of dependency on international merchandise trade, which was

approximately 100.9% of gross domestic product (GDP) in 2017 (World Bank, 2019). Exporting US\$237 billion worth of goods, Thailand ranked as the world's 20th-largest exporter in 2017 (World Bank, 2019). Imports in the same year totalled US\$223 billion, the 23rd-highest value in the world (World Bank, 2019). Many producers have successfully participated in the global value chain, especially in the electronics and automotive sectors.

Exports accounted for around 52.0% of GDP in 2017 (World Bank, 2019). Exports are mainly manufactured goods, the most important being computers (7.9% of total exports in 2016), motor vehicles (7.9%), electronic integrated circuits (4.6%), and telephone sets (2.6%). Rubber and rice each account for 1.8%. Major export partners are ASEAN countries (25.2%), the United States (12.4%), the European Union (11.2%), and Japan (9.4%) (Center for International Development, 2019).

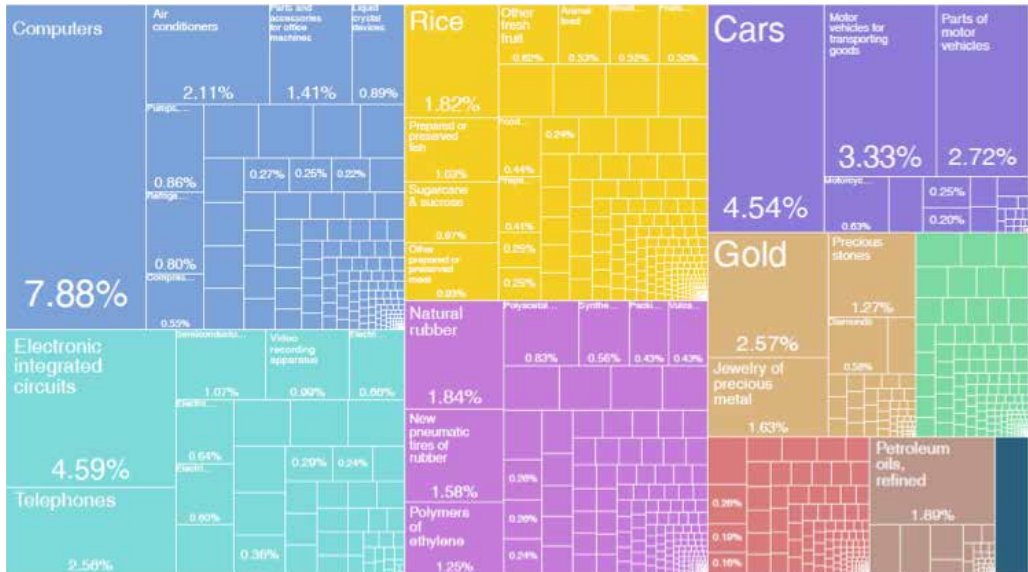
Thailand imports mainly raw materials and intermediate goods: parts of electronic appliances, base metals, chemicals, and plastic. Whilst fuel accounted for 11.5% of total imports in 2016, electronic integrated circuits (4.4%) and automotive parts (3.0%) were among the most crucial imports (Figure 9.2). The main import partners are China (19.9% of total imports), ASEAN countries (18.6%), Japan (14.4%), and the European Union (11.2%) (Center for International Development, 2019).

Thailand's simple average most favoured nation (MFN) applied tariff rate for all imported products was 9.5% in 2017, much lower than its bound rate of 28.0%. For imported non-agricultural products, where 40.5% of tariff lines in 2017 were MFN duty-free, the simple average MFN applied tariff rate was 7.2%. Yet, Thailand levied high tariffs on non-agricultural goods: for example, motor vehicles were subject to a tariff of 60%–200%, wood products 60%–80%, and jewellery 60%. In contrast, imported agricultural products were more sensitive. In the same year, only 12.4% of tariff lines for agricultural products entered the country MFN duty-free, and the simple average MFN applied tariff rate for agricultural products was 25.1%. The tariff on sugar cane was 65%, whilst a maximum MFN duty of 60% was imposed on onions, processed fish products, distilled spirits, and tobacco products.

Thailand imposes tariffs on a small number of exports: certain types of bovine hides, certain wood and sawn wood, and oil exported from the Thailand–Malaysia Joint Development Area to other countries.

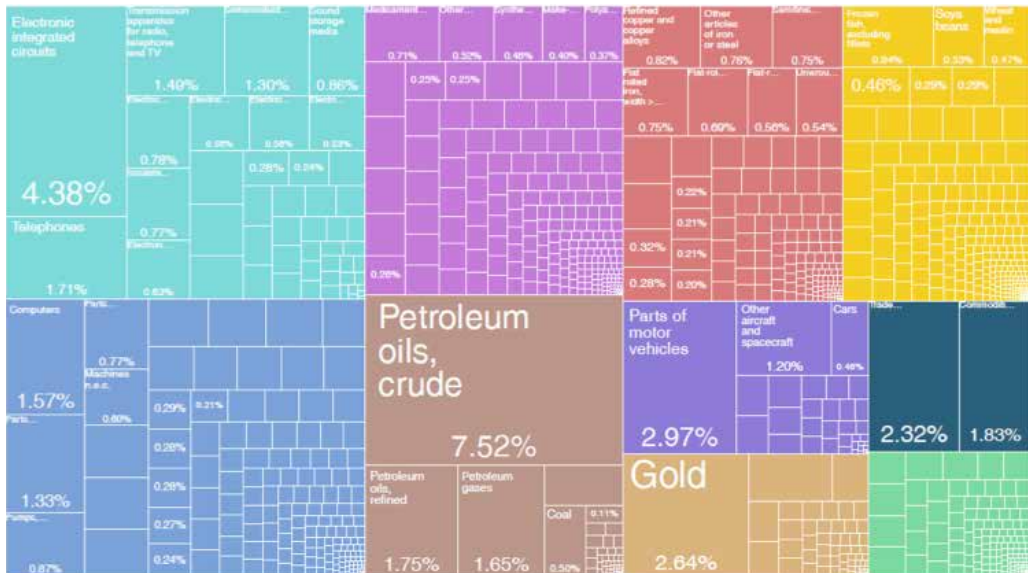
NTMs have played a significant role in Thailand's international trade policy regime. Depending on type, agricultural and non-agricultural products, either imported or exported, are subject to certain kinds of NTMs, the details of which are summarised in subsequent sections.

Figure 9.1: Composition of Thailand's Exports, 2016



Source: Center for International Development (2019).

Figure 9.2: Composition of Thailand's Imports, 2016



Source: Center for International Development (2019).

1.2. Non-tariff Measure-related Laws and Regulations in Thailand

Four types of laws are in place: the constitution, acts and emergency decrees, royal decrees, and administrative regulations (Figure 9.3). They function in a hierarchy, which determines how they rank in authority and how the authority and scope of each level is derived from the precedent one. A lower-level regulation generally cannot contradict a higher-level one.

The constitution is the supreme law. A constitution-based law defines, in general, the powers of and relationships among the three branches of government as well as those between the government and citizens regarding fundamental rights and responsibilities. The constitution does not directly stipulate NTMs.

Acts and emergency decrees are similar in hierarchical order but result from different procedures. Whilst acts are enacted with the approval of parliament, emergency decrees are endorsed by the cabinet to deal with crises. An example of an NTM-related act is the Industrial Products Standards Act, B.E. 2511 (1968), which authorises a specific entity to oversee all standards-related activities regarding industrial products. The act mentions not only how the competent entity may exercise its authority but also how businesses should comply with the act. However, the act does not contain a list of affected products.

A royal decree specifies principles and details for selected provisions of an act or emergency decree. It can be issued by the executive power without parliamentary approval, normally through the minister of the ministry authorised under a specific act or emergency decree. An example of an NTM-related royal decree is the Royal Decree Stipulating That White Portland Cement Has to Comply with the Standard, B.E. 2558 (2015). However, the royal decree does not mention details of standard criteria or their conformity assessment.

An administrative regulation is at the lowest level and typically incorporates detailed information about requirements, criteria, procedures, and penalties. It is enacted under the specific provisions of an act or emergency decree by the executive power. The exercise of power by the minister without prior cabinet approval is a ministerial notification, and when the minister has prior cabinet approval, a ministerial regulation. Because they contain so much information, administrative regulations at the ministerial level are the main source of NTM-related regulations.¹ An example of an NTM-related administrative

¹ Subordinate entities issue sub-levels of administrative regulations, such as department and committee notifications, which generally give no information crucial for registering NTMs.

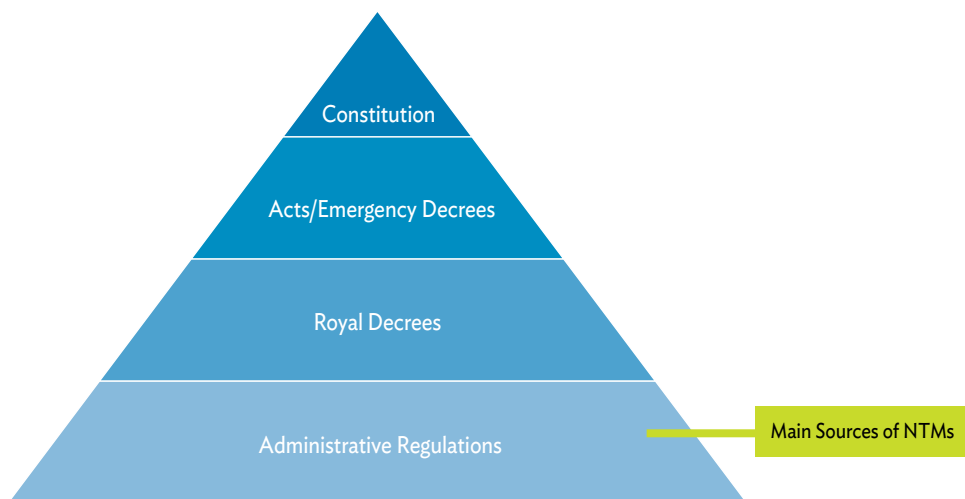
regulation is the Notification of the Ministry of Industry No. 4530 B.E. 2556 (2013) Stipulating the New Standards for White Portland Cement.

There are four centralised sources of legal documents and a long list of websites belonging to at least 35 regulatory agencies. There is not a single best source that covers all NTM-related regulations. Each source has advantages and disadvantages.

As all laws and regulations, regardless of hierarchical order, are required to be chronologically published in the Royal Thai Government Gazette (<http://www.mratchakitcha.soc.go.th>) before entry into force, the website has the most comprehensive and up-to-date legal documents, including the digital version of laws and regulations published in every volume since it was first published in 1858. It is impractical, however, to go through each volume to collect a list of NTM-related regulations. This source is the best but last resort when other sources are missing, inaccessible, or outdated.

The National Trade Repository (<http://www.thailandntr.com>) is the centralised database not only for NTMs but also key information about the country's international trade regime, such as tariffs, customs regulations, and service trade and e-commerce regulations. The website has at least two drawbacks. First, the regulations are submitted by the regulatory agencies at their own discretion and depending on their understanding of NTMs and willingness to make public NTM-related regulations. Second, it is unknown whether the regulations submitted are up to date.

Figure 9.3: Hierarchy of Thailand's Laws and Regulations

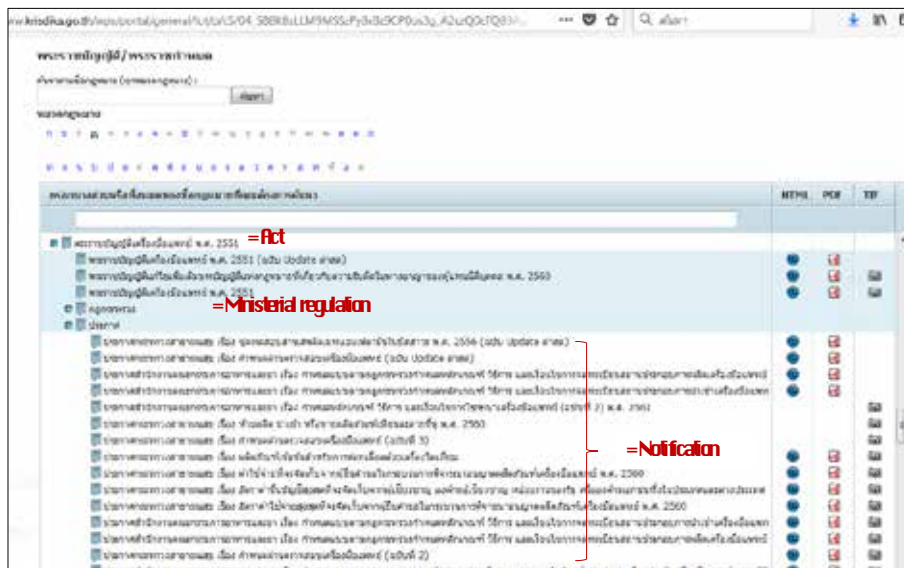


Source: Authors.

This study relied heavily on the Office of the Council of State (<http://www.krisdika.go.th>) (Figure 9.4). It is a centre for compiling and disseminating legal information. Lower-level regulations are listed and classified under their associated acts or emergency decrees. The website shows whether regulations are in force or revoked. The only imperfection is that it is uncertain whether all promulgated regulations are listed and updated.

The websites of regulatory agencies were thoroughly scrutinised. Whilst some deserve praise, many need massive and immediate reform. An example of a good website is that of the Department of Foreign Trade, where all regulations under its supervision are systematically categorised into type, product affected, and legal status. Other websites, however, lack information.

Figure 9.4: Appearance of the Office of the Council of State’s Website



Source: <http://www.krisdika.go.th> (accessed 1 February 2019).

2. Overview of Thailand’s Non-tariff Measures

This section summarises the comprehensiveness of the NTM database and provides a set of stylised facts about the types of NTMs and the regulatory institutions involved.

2.1. Comprehensiveness of Non-tariff Measures

NTMs have played an increasing role in Thailand’s international trade policy regime. In 2015, they were scattered amongst 59 acts or emergency decrees, then amongst 60 in

2017 when the Control of Marketing Promotion of Infant and Young Child Food Act, B.E. 2560 (2017) was issued. The act came with a new regulatory institution, increasing the number of such institutions from 34 in 2015 to 35 in 2018 (Table 9.1).

A combination of centralised and decentralised methods to collect data² showed that 757 regulations containing NTMs were implemented in 2015 and 821 in 2018.³ Most of the regulations are in the Plant Quarantine Act, B.E. 2507 (1964), Industrial Products Standards Act, B.E. 2511 (1968), and Food Act, B.E. 2522 (1979) (Appendix).

We classified 3,039 NTMs in 2015 and 3,295 NTMs in 2018, about 70% of which were in the three acts mentioned above. The number of NTMs in the database was about 16 times more than reported to the World Trade Organization (WTO).

The conversion of the products described in each regulation into analogous harmonised codes resulted in 10,635 affected products at the national tariff line 8-digit level. This implies that NTMs hit 100% of all tariff lines and thus have an impact on the trade of these products.

Table 9.1: Comprehensiveness of Non-tariff Measures in Thailand

Comprehensiveness	Number in 2015	Number in 2018
Total number of acts/emergency decrees involved	59	60
Total number of regulatory agencies	34	35
Total number of coded regulations	757	821
Total number of NTMs reported to the WTO (measures in force) ¹	184	200
Total number of coded NTMs	3,039	3,295
Total affected products at the national tariff line level		
a. Total number of affected products ²	10,635	10,635
b. Share of the number of affected products to the number of total products ³	100.0	100.0

NTM = non-tariff measure.

Notes:

1. NTMs reported to the World Trade Organization exclude contingent trade-protective measures.
2. One product may be affected by more than one measure, but the same HS-coded product will be counted as one product, e.g. HS 01012100 has three NTMs but will be counted as 'one affected product'.
3. Thailand adopts the HS-8 digit at the national tariff line level and has 10,635 tariff lines.

Source: Authors, based on ERIA–UNCTAD (2019) and WTO (2019).

² Thanks to recent efforts by the Office of the Council of State and many government agencies, the 2018 database was more comprehensive than the 2015 one.

³ Unless otherwise specified, all figures mentioned in this study are from 31 December 2015 and 31 December 2018.

2.2. Regulatory Institutions Issuing Non-tariff Measures

Regulatory institutions issuing NTMs are diverse across ministries. In 2018, there were 35 sub-agencies: 33 were under the supervision of 13 ministries, and 2 were independent public institutions. In 2015–2018, 20 sub-agencies saw increasing numbers of NTMs, while no institution saw a decrease, and the Department of Health was the only newcomer.

The numbers of NTMs adopted in 2018 and 2015 were highly concentrated in a few agencies (Table 9.2). At the ministerial level, about four-fifths of total NTMs are regulated by the Ministry of Agriculture and Cooperatives' Department of Agriculture (plants), Department of Livestock Development (land animals), and Department of Fisheries (aquatic creatures); the Ministry of Public Health's National Trade Repository (edible food, edible and inedible medicament); and the Ministry of Industry's Thai Industrial Standards (industrial products).

Table 9.2: Non-tariff Measures in Thailand Classified by Issuing Institution

	Issuing Institution	NTMs in 2015		NTMs in 2018	
		Number	Proportion (%)	Number	Proportion (%)
1	Ministry of Agriculture and Cooperatives	1,150	37.84	1,257	38.15
	1.1 Department of Agriculture	1,068	35.14	1,145	34.75
	1.2 Department of Livestock Development	51	1.68	53	1.61
	1.3 Department of Fisheries	22	0.72	46	1.40
	1.4 National Bureau of Agriculture Commodity and Food Standards	9	0.30	13	0.39
2	Ministry of Public Health	814	26.79	863	26.19
	2.1 Food and Drug Administration	789	25.96	836	25.37
	2.2 Department of Disease Control	12	0.39	12	0.36
	2.3 Department of Medical Sciences	11	0.36	12	0.36
	2.4 Department of Thai Traditional and Alternative Medicine	2	0.07	2	0.06
	2.5 Department of Health	0	0.00	1	0.03
3	Ministry of Industry	559	18.39	622	18.88
	3.1 Thai Industrial Standards	510	16.78	564	17.12
	3.2 Department of Industrial Works	27	0.89	34	1.03
	3.3 Office of the Cane and Sugar Board	18	0.59	19	0.58
	3.4 Department of Primary Industries and Mines	4	0.13	5	0.15
4	Ministry of Commerce	263	8.65	278	8.44
	4.1 Department of Foreign Trade	223	7.34	236	7.16
	4.2 Department of Internal Trade	40	1.32	42	1.27

	Issuing Institution	NTMs in 2015		NTMs in 2018	
		Number	Proportion (%)	Number	Proportion (%)
5	Prime Minister's Office	70	2.30	73	2.22
	5.1 Office of the Consumer Protection Board	65	2.14	68	2.06
	5.2 Secretariat of the Cabinet	5	0.16	5	0.15
6	Ministry of Energy	61	2.01	61	1.85
	6.1 Department of Energy Business	57	1.88	57	1.73
	6.2 Energy Policy and Planning Office	3	0.10	3	0.09
	6.3 Department of Mineral Fuels	1	0.03	1	0.03
7	Other public institutions	50	1.65	56	1.70
	7.1 Office of the National Broadcasting and Telecommunications Commission	48	1.58	52	1.58
	7.2 Royal Thai Police	2	0.07	4	0.12
8	Ministry of Natural Resources and Environment	33	1.09	39	1.18
	8.1 Pollution Control Department	16	0.53	20	0.61
	8.2 Department of National Park, Wildlife and Plant Conservation	12	0.39	14	0.42
	8.3 Department of Mineral Resources	3	0.10	3	0.09
	8.4 Royal Forest Department	2	0.07	2	0.06
9	Ministry of Finance	15	0.49	18	0.55
	9.1 Excise Department	15	0.49	18	0.55
10	Ministry of Defence	8	0.26	8	0.24
	10.1 Defence Technology Institute (Public Organisation)	5	0.16	5	0.15
	10.2 Office of the Permanent Secretary for Ministry of Defence	2	0.07	2	0.06
	10.3 Defence Industry Department	1	0.03	1	0.03
11.	Ministry of Science and Technology	2	0.07	6	0.18
	11.1 Office of Atoms for Peace	2	0.07	6	0.18
12.	Ministry of Culture	5	0.16	5	0.15
	12.1 Fine Arts Department	4	0.13	4	0.12
	12.2 Office of the Permanent Secretary for Ministry of Culture	1	0.03	1	0.03
13.	Ministry of Interior	5	0.16	5	0.15
	13.1 Department of Provincial Administration	5	0.16	5	0.15
14.	Ministry of Transport	4	0.13	4	0.12
	14.1 Department of Land Transport	4	0.13	4	0.12
	Total	3,039	100.00	3,295	100.00

NTM = non-tariff measure.

Source: Authors, based on ERIA-UNCTAD (2019).

2.3. Non-tariff Measure Classification by Type

Thailand has imposed many types of NTMs, but none were reported as a finance measure, during 2015–2018. About 86% of NTMs in force in 2018 were import-related, whilst the rest were export-related, implying that imported goods catch regulatory agencies' attention more than other goods (Table 9.3).

As for import-related NTMs, sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT) have been outstanding. In 2018, a total of 1,256 NTMs were identified as SPS measures and 1,098 as TBT. SPS measures comprised 38% of total existing NTMs and were identified from 12 acts or emergency decrees. The regulations under the Plant Quarantine Act, B.E. 2507 (1964) on the control and prevention of pest outbreaks contributed the most SPS measures (about 55%), followed by food safety regulations under the Food Act, B.E. 2522 (1979) (39%). The most frequently used SPS measure was the certification requirement to prove that goods to be imported comply with technical SPS specifications (A83). Other common SPS measures included authorisation requirements for importers from the competent authorities (A15), as well as requirements related to packaging (A33) and storage and transport conditions (A64) to ensure that goods have been properly handled before reaching consumers. In 2015–2018, SPS measures saw a relatively small net increase of 4%.

TBT accounted for about one-third of total NTMs in 2018, associated with 33 acts or emergency decrees. Approximately 51% of total TBT came from regulations under the Industrial Product Standard Act, B.E. 2511 (1968) and other requirements, such as for labelling and packaging of certain products. The regulations under the Food Act, B.E. 2522 (1979) accounted for 13.92%. Unsurprisingly, labelling (B31) as well as product quality, safety, or performance requirements (B7) topped the TBT list. The most regularly used conformity assessments related to TBT were testing (B82) and certification requirements (B83). TBT recorded an 8% net increase in 2015–2018.

Pre-shipment inspection and other formalities were the next-highest import-related NTMs, accounting for 6% of total NTMs registered in 2018 and associated with 20 acts or emergency decrees. A high proportion (69%) of such NTMs was mentioned in the Plant Quarantine Act, B.E. 2507 (1964) regulations, and the other 12% was mentioned in the Prices of Goods and Services Act, B.E. 2542 (1999) regulations. Requirements for goods to pass through specified ports of customs (C3) as well as import-monitoring and surveillance requirements (C4) were at times stipulated for goods requiring a high level of attention. A big net increase of 25% in the number of such NTMs was observed in 2015–2018.

Price control measures, including additional taxes and charges, accounted for 5% of total NTMs in 2018. They were identified in 30 acts or emergency decrees, with the Plant Quarantine Act, B.E. 2507 (1964) accounting for most of the NTMs. The most popular measure was the import license fee (F65), which targets many agricultural and industrial products. In 2015–2018, measures related to price control and additional taxes and charges increased by 8%.

Non-automatic licensing, quotas, prohibitions, and quantity control measures other than for SPS measures or TBT comprised 4% of total NTMs in 2018. Their objective is to protect domestic industry, particularly sensitive products such as garlic, onion, soybeans, milk, palm oil, and sugar. Thailand also adopted a regulation that certain agricultural products could be imported only by the state-trading enterprise – the Public Warehouse Organization.

Export-related measures in 39 acts or emergency decrees accounted for 14% of total NTMs in 2018. The Plant Quarantine Act, B.E. 2507 (1964) accounted for 23% of all export-related NTMs, the Export Commodity Standards Act, B.E. 2503 (1960) for 18%, and the Export and Import of Goods Act, B.E. 2522 (1979) for 15%. Export-related NTMs vary widely: for instance, export license requirements (P13); export fees levied in connection to services provided (P43); product quality, safety, or performance requirements (P16); certification requirements (P183); and testing requirements (P181). In 2015–2018, the number of export-related measures saw a huge increase of 14%.

Thailand implemented a total of 100 sub-types of NTMs based on the 2018 UNCTAD classification. The 10 most intensively employed NTMs typically accounted for more than half of total NTMs (Table 9.4) and rarely changed during 2015–2018. TBT-related labelling requirements (B31) were the most used, followed by product quality, safety, or performance requirements (B7) and SPS certification requirements (A83).

Table 9.3: Non-tariff Measures in Thailand Classified by Chapter

	Chapter	NTMs in 2015		NTMs in 2018	
		Number	Proportion (%)	Number	Proportion (%)
A	Sanitary and phytosanitary (SPS)	1,204	39.62	1,256	38.12
B	Technical barriers to trade (TBT)	1,015	33.40	1,098	33.32
C	Pre-shipment inspection and other formalities	161	5.30	202	6.13
E	Non-automatic licensing, quotas, prohibitions, and quantity control measures other than SPS or TBT reasons	106	3.49	116	3.52
F	Price control measures, including additional taxes and charges	157	5.17	170	5.16

	Chapter	NTMs in 2015		NTMs in 2018	
		Number	Proportion (%)	Number	Proportion (%)
G	Finance measures	0	0.00	0	0.00
H	Measures affecting competition	1	0.03	1	0.03
P	Export-related measures	395	13.00	452	13.72
	Total NTMs	3,039	100.00	3,295	100.00

Source: Authors, based on ERIA-UNCTAD (2019).

Table 9.4: Top 10 Non-tariff Measures in Thailand

NTM Type	NTM Code	NTMs in 2015		NTMs in 2018	
		Number	Proportion (%)	Number	Proportion (%)
Technical barriers to trade (TBT)-related labelling requirements	B31	303	9.97	333	10.11
Product quality, product safety, or product performance requirements	B7	254	8.36	259	7.86
Sanitary and phytosanitary (SPS) certification requirements	A83	212	6.98	232	7.04
TBT testing requirements	B82	150	4.94	162	4.92
TBT certification requirements	B83	139	4.57	155	4.70
Import license fee	F65	140	4.61	153	4.64
Requirements for goods to pass through specified ports of customs	C3	129	4.24	141	4.28
SPS authorisation requirements for importers from the competent authorities	A15	124	4.08	132	4.01
SPS-related packaging requirements	A33	108	3.55	114	3.46
SPS-related storage and transport conditions	A64	66	2.17	67	2.03
Others		1,414	46.53	1,547	46.95

Source: Authors, based on ERIA-UNCTAD (2019).

3. Non-tariff Measure Indicators

NTM incidence is further analysed using the frequency index, coverage ratio, and prevalence score. The frequency index is the share of tariff lines within a product group affected by at least one NTM. The coverage ratio, which is simply the frequency ratio weighted by trade, is the share of the trade values of each tariff line within a product group affected by at least one NTM. The prevalence score indicates the average number of distinct NTMs imposed on tariff lines within a product group. All NTM indicators were calculated based on UNCTAD's methodology by excluding NTMs that cover only some products at the 6-digit harmonised level. This exclusion aims to downplay the overstatement of some specific NTMs imposed only on products with specific characteristics or purposes.

For example, whilst only irradiated food products are subject to the specific labelling requirement, food products more commonly found in the market are non-irradiated and hence not subject to this requirement. The specific labelling requirement for irradiated food products is thus excluded when calculating the NTM indicators. As a result, even though 100% of products at the 8-digit national tariff line level were affected by NTMs, it was not necessary for the frequency index to be 100%.

3.1 Export-related Non-tariff Measure Indicators

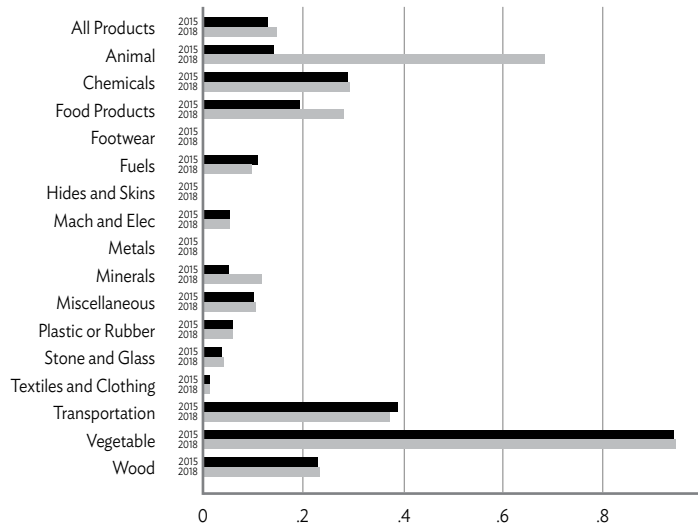
Thailand has seldom adopted NTMs on its exports (Figure 9.5 and Figure 9.6). In 2018, the frequency index for exports was 0.15 and the coverage ratio 0.33, which means that 15% of different types of exported goods at the national tariff line level, accounting for 33% of total exports in 2018, were subject to at least one NTM. Goods in most sectors have a frequency index below 10% and a coverage ratio under 30%. There are only two sectors with exceptionally high percentages, either in terms of the frequency index or coverage ratio, or the number of goods affected by at least one NTM – vegetable and animal products. The NTMs imposed on them are mainly to ensure that they are pest-free, disease-free, and perfectly safe for consumers. Exported transport, chemical, and food products also have a moderate frequency index with a high coverage ratio, which implies that, as Thailand is a leading exporter of these products, exported goods are required to meet specified standards and provide key information to consumers.

The frequency indices of exported goods in all sectors, except three, rarely changed in 2015–2018. Animal and mineral products recently saw a swift increase in their frequency index and coverage ratio. The frequency index for animal products rose markedly because of the requirements related to the revamped Animal Epidemics Act, Animal Feed Quality Control Act, and Emergency Decree on Fisheries. The refurbished Minerals Act resulted in a noticeable increase in the frequency index as the government moved to ensure that the newly enacted licensing requirements had better coverage of valuable minerals to be exported. Stone and glass product exports saw a considerable increase in coverage ratio but not in frequency index.

The overall prevalence score for all exports was low at only 0.52 in 2018 (Figure 9.7). Almost all exports had a prevalence score of less than 1. But animal and vegetable products had a relatively high prevalence score. On average, 2.90 export-related measures were applied to animal products and 1.73 to vegetable products. Exporters of these products must have an export license. SPS certification is also usually required as proof that the product meets specified SPS requirements, such as tolerance limits for residues or contamination by certain non-microbiological substances, restricted use of certain substances in foods and feeds and their contact materials, and hygienic requirements related to SPS.

The prevalence score of most exports also rarely changed in 2015–2018. However, animal products saw an immense increase in every NTM indicator; the prevalence score jumped from 0.49 in 2015 to 2.90 in 2018, implying that each exported product was subject to at least two additional measures. This indicates that animal products have recently become a priority in enforcing NTMs.

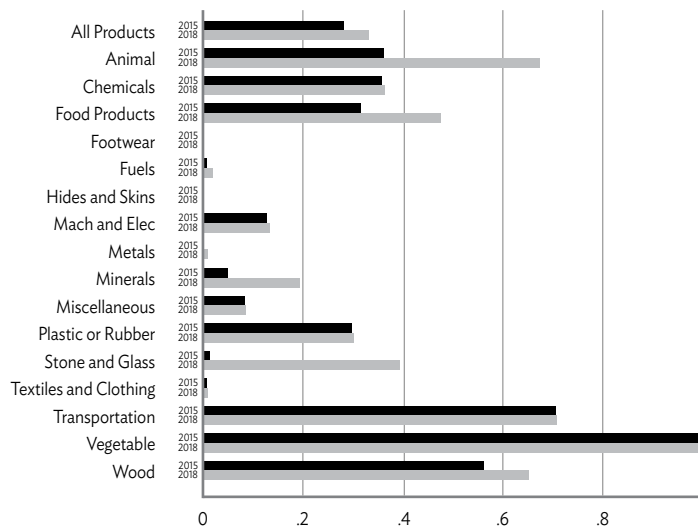
Figure 9.5: Frequency Index of Thailand’s Exports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA–UNCTAD (2019).

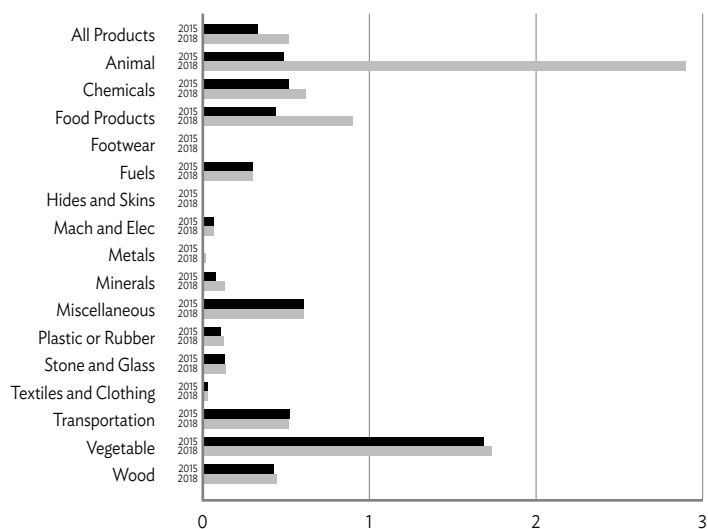
Figure 9.6: Coverage Ratio of Thailand’s Exports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA–UNCTAD (2019).

Figure 9.7: Prevalence Score of Thailand's Exports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA–UNCTAD (2019).

3.2 Thailand's Import-related Non-tariff Measure Indicators

Imports have been more susceptible than exports to at least one NTM (Figure 9.8 and Figure 9.9). The frequency index for imports, in general, is about double that for exports; 29% of different types of imports at the national tariff line level in 2018 were subject to at least one NTM (Figure 9.8). In most sectors, imports have a higher frequency index than exports. More than 9 out of 10 vegetable, animal, and food imports were subject to NTMs.

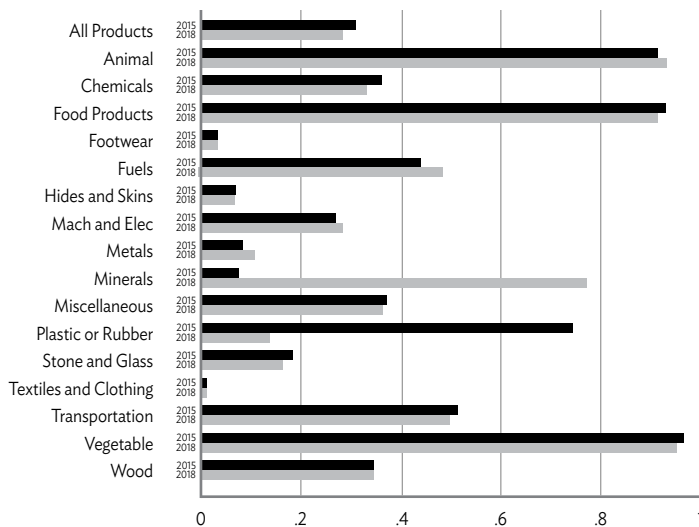
The overall coverage ratio for imports is slightly higher than for exports; 38% of total imports in 2018 were subjected to NTMs. Whilst NTMs were imposed on almost 100% of vegetable and animal products traded, few NTMs were imposed on imported textiles and clothing, footwear, and metals. It would be instructive to study further why imported food products' coverage ratio is lower than their frequency index. Is the country's trade structure the reason for lower demand for products affected by NTMs, or do NTMs restrict import volume?

The frequency index and coverage ratio of imported goods in almost all sectors rarely changed in 2015–2018. Thailand kept close watch on almost all imported vegetable, animal, and food products, whilst the amended Minerals Act resulted in a notable increase in NTMs applied to imported minerals.

The overall prevalence score for imports in 2018 was high at 2.66 (Figure 9.10), which means that on average almost three NTMs were imposed on each product imported. Imported food products had the top prevalence score at 12.47, followed by animal products at 12.35, and vegetable products at 10.44. Import licensing is normally a prerequisite for importing these goods. Depending on the type of goods, either or both SPS and TBT certification is also required. In many cases, inspection and laboratory testing related to SPS, TBT, or both are also needed. Labelling is often mandatory for SPS, TBT, or both purposes. Products specifically subject to SPS standards must meet requirements such as tolerance limits for residues of or contamination by certain non-microbiological substances, restricted use of certain substances in foods and feeds and their contact materials, hygienic requirements related to SPS, and treatment to eliminate plant and animal pests and disease-causing organisms in the final product. When TBT is mentioned, product quality, safety, or performance requirements are commonly obligatory. As epidemics occur frequently, the authorities adopt a systems approach to better cope with SPS-related risks, and sometimes prohibit the import of products from countries or regions affected by contagious diseases.

The prevalence score for imports changed insignificantly in 2015–2018. The prevalence score for mineral products changed mainly because of the extension of product coverage, not because of the increase in number of measures.

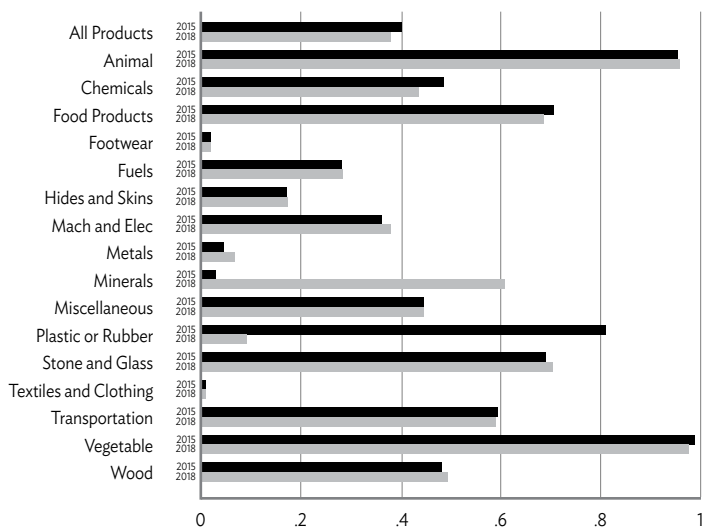
Figure 9.8: Frequency Index of Thailand’s Imports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA–UNCTAD (2019).

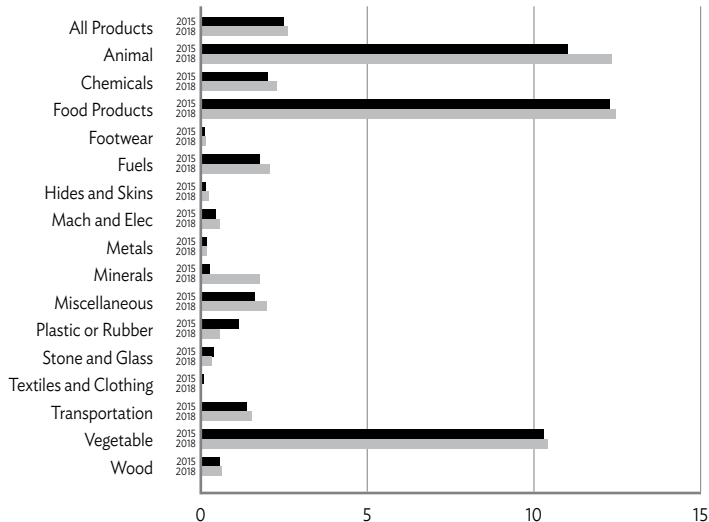
Figure 9.9: Coverage Ratio of Thailand's Imports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA-UNCTAD (2019).

Figure 9.10: Prevalence Score of Thailand's Imports by Product Group, 2015 and 2018



Note: Products and product groups are defined at the 8- and 2-digit HS codes, respectively.

Source: ERIA-UNCTAD (2019).

4. Conclusions and Policy Recommendations

Using a combination of centralised and decentralised sources of information, and based on the UNCTAD's 2018 NTM classification, we updated Thailand's database of NTMs implemented during 2015–2018. More comprehensive than the previous database, the 2018 database contains 3,039 NTMs for 2015 and 3,295 NTMs for 2018. The number of classified NTMs was about 16 times more than reported to the WTO.

Although the number of NTMs in force in Thailand is higher than in other ASEAN countries and continues to rise, most of the NTMs are technical measures to ensure safety for all. The Department of Agriculture, Food and Drug Administration, and Thai Industrial Standards are the 'big three' regulatory sub-agencies, holding almost four-fifths of all NTMs. SPS and TBT safety concerns are their responsibility. The Department of Agriculture mainly utilises the Plant Quarantine Act, B.E. 2507 (1964) to keep close watch over the plant-related NTMs. With the Food Act, B.E. 2522 (1979), the Food and Drug Administration regulates edible food and edible and inedible medicaments. Thai Industrial Standards is guided by the Industrial Products Standards Act, B.E. 2511 (1968).

NTMs affect 100% of all 8-digit tariff lines. Of NTMs in force in 2018, about 86% were import-related, implying that regulatory agencies pay more attention to imports. The total number of affected goods (i.e. 100%) might be overstated, however, because, in many cases, a specific NTM was imposed only on products with certain characteristics or purposes. We therefore further analysed the incidence of NTMs by using the frequency index, coverage ratio, and prevalence score.

Of the goods at the national tariff line level, 29% accounted for 38% of total imports in 2018 and were subject to at least one NTM. On average, almost three import-related NTMs were imposed per product. Regardless of any indicators used, imported food, animal, and vegetable products were subject to a high incidence of applied NTMs: 12.47, 12.35, and 10.44, respectively. Few NTMs were imposed on imported textiles and clothing, footwear, and metals.

Thailand has applied NTMs to certain key exports: 15% of exported goods at the national tariff line level accounted for 33% of total exports in 2018 and were subject to at least one NTM. The overall prevalence score for all exports is low at only 0.52 in 2018; almost all export sectors have a prevalence score of less than 1, except for animal (2.90) and vegetable products (1.73).

The government has adopted many initiatives to pull Thailand out of the middle-income trap. 'Government 4.0' aims to make the government more open and connected, citizen-

centric, as well as smart and high performing; give individuals and businesses access to clear and straightforward information; make it easy for all stakeholders to comply with regulations; and make the exercise of authority more transparent and speedy.

Although they have a long way to go, two efforts are praiseworthy. One is the enforcement of the Licensing Facilitation Act B.E.2558 (2015), stipulating that each government authority shall prepare a public manual outlining the rules, procedures, and conditions for the submission of applications; defining the work flow; and specifying the time it takes to grant licenses. The manual should also list the documents to be attached to the application and specify whether electronic application is available or not for the license of interest. The other is the collaboration among the Office of the Public Sector Development Commission, Office of the Council of State, and Electronic Government Agency (Public Organisation) to help regulatory agencies disseminate their regulations online. These two efforts will result in the successful collection and classification of NTMs.

To streamline NTMs, the following immediate actions are proposed:

- Validate and merge NTMs in the database with those in the National Trade Repository, which should be the only and official comprehensive and referable databank, and confirm which NTMs are missing in the repository as well as which agencies misreport NTMs. Agencies may misreport NTMs because they are either not aware that their regulations are NTMs or want to hide these NTMs. NTMs can be streamlined only if regulatory institutions admit the existence of NTMs in the first place.
- Work closely with the government task force to streamline important NTMs and abolish unnecessary ones. Businesses complain that licensing requirements are amongst the most burdensome NTMs (Thailand Development Research Institute, 2013, 2015). The government's response is the Regulatory Guillotine Committee, which reviews national license and permit requirements to eliminate redundant ones, and streamline burdensome and complex procedures to promote efficiency and economic development. At least two flagships are in the committee's pipeline: the Food and Drug Administration's registration of health-related products and the Department of Agriculture's SPS licensing of agricultural products (Office of the Public Sector Development Commission, 2018). Our database could help the committee.

References

Center for International Development (2019), *The Atlas of Economic Complexity, 2019*. Cambridge, MA: Center for International Development. <http://atlas.cid.harvard.edu/> (accessed 1 February 2019).

Economic Research Institute for ASEAN and East Asia and United Nations Conference on Trade and Development (2019), *ERIA-UNCATD NTM database, 2018*. Geneva: United Nations Conference on Trade and Development (accessed 1 February 2019).

Office of the Public Sector Development Commission (2018), *Annual reports on the public sector development*. Bangkok: Office of the Public Sector Development Commission, Thailand.

Thailand Development Research Institute (2013), *NTMs of Thailand trade partners in ASEAN*. Bangkok: Office of Industrial Economics, Ministry of Industry, Thailand.

Thailand Development Research Institute (2015), 'Thailand Country Study ASEAN Economic Community Blueprint Mid-term Review Project', *ERIA Discussion Paper Series*, ERIA-DP-2015-46.

World Bank (2019), *World Development Indicators, 2019*. Washington, DC: World Bank. <https://data.worldbank.org/indicator/tg.val.totl.gd.zs> (accessed 1 February 2019).

World Bank (2019), *World Development Indicators, 2019*. Washington, DC: World Bank. <https://data.worldbank.org/indicator/tm.val.mrch.cd.wt> (accessed 1 February 2019).

World Bank (2019), *World Development Indicators, 2019*. Washington, DC: World Bank. <https://data.worldbank.org/indicator/tx.val.mrch.cd.wt> (accessed 1 February 2019).

World Trade Organization (2017), *World Trade Statistical Review*. Geneva: World Trade Organization.

World Trade Organization (2018), *World Tariff Profiles 2018*. Geneva: World Trade Organization.

World Trade Organization (2019), *Integrated Trade Intelligence Portal 2019*. Geneva: World Trade Organization. <https://i-tip.wto.org/goods/Default.aspx> (accessed 1 February 2019).

Appendix

Table 9.A1: Non-tariff Measures in Thailand Classified by Act or Emergency Decree

Act or Emergency Decree	Number of Regulations		Number of NTMs	
	2015	2018	2015	2018
Newly issued				
Control of Marketing Promotion of Infant and Young Child Food Act, B.E. 2560 (2017)	0	1	0	1
Existing				
Act on Ancient Monuments, Antiques, Objects of Art and National Museums, B.E. 2504 (1961)	2	2	4	4
Agricultural Standards Act, B.E. 2551 (2008)	5	8	9	13
Alcohol Beverage Control Act B.E. 2551 (2008)	1	1	1	1
Animal Breeding Development Act, B.E. 2509 (1966)	1	1	1	1
Animal Epidemics Act, B.E. 2558 (2015)	7	7	21	25
Animal Feed Quality Control Act, B.E. 2558 (2015)	15	18	29	27
Arms Control Act, B.E. 2530 (1987)	2	2	2	2
Arms Factory act, B.E. 2550 (2007)	4	4	5	5
Beasts of Burden Act, B.E. 2482 (1939)	1	1	2	2
Broadcasting and Television Businesses Act, B.E. 2551 (2008)	1	1	2	2
Chain Saw Act, B.E. 2545 (2002)	2	2	2	2
Commodities Control Act, B.E.2495 (1952)	1	1	4	4
Consumer Protection Act, B.E. 2522 (1979)	65	68	65	68
Control of Exports of Armaments and War Materials out of the Kingdom. Act, B.E. 2495 (1952)	1	1	1	1
Cosmetics Act, B.E. 2558 (2015)	9	9	17	18
Elephant Ivory Tusks Act, B.E.2558 (2015)	2	2	6	6
Emergency Decree on Fisheries, B.E. 2558 (2015)	5	11	20	44
Emergency Decree on Prevention against Abuse of Volatile Substances, B.E. 2533 (1990)	1	1	1	1
Emergency Decree on Remedy and Prevention of Shortage of Fuel Oil, B.E. 2516 (1973)	2	2	2	2
Energy Conservation Promotion Act, B.E. 2535 (1992)	1	1	1	1
Enhancement and Conservation of the National Environmental Quality Act, B.E. 2535 (1992)	9	11	16	20
Excise Act, B.E. 2560 (2017)	3	6	11	15
Export And Import Of Goods Act, B.E. 2522 (1979)	83	86	152	157
Export Commodity Standards Act, B.E. 2503 (1960)	28	30	75	83
Fertilisers Act, B.E. 2518 (1975)	5	5	13	13
Film and Video Act, B.E. 2551 (2008)	1	1	1	1
Firearms, Ammunition, Explosives, Fireworks and Imitation Firearms Act B.E. 2490 (1947)	3	3	3	3
Food Act, B.E. 2522 (1979)	98	102	617	647

Act or Emergency Decree	Number of Regulations		Number of NTMs	
	2015	2018	2015	2018
Fuel Trade Act, B.E. 2543 (2000)	16	16	57	57
Hazardous Substance Act, B.E. 2535 (1992)	10	14	27	34
Health Promotion Foundation Act, B.E. 2544 (2001)	1	1	2	2
Industrial Products Standards Act, B.E. 2511 (1968)	108	118	510	564
Measurement Act, B.E. 2542 (1999)	4	5	8	12
Medical Device Act, B.E. 2551 (2008)	22	24	78	85
Medicine Act, B.E. 2510 (1967)	10	10	19	19
Minerals Act, B.E. 2560 (2017)	2	3	4	5
Narcotic Act B.E. 2522 (1979)	10	12	24	30
Nuclear Energy for Peace Act, B.E. 2559 (2016)	1	1	2	6
Paleontological Resources Protection Act, B.E. 2551 (2008)	3	3	3	3
Pathogens and Animal Toxins Act, B.E. 2558 (2015)	2	4	11	12
Petroleum Act, B.E. 2514 (1971)	1	1	1	1
Plant Quarantine Act, B.E. 2507 (1964)	94	103	1,029	1,106
Plant Variety Protection Act, B.E. 2542 (1999)	1	1	2	2
Plants Act, B.E. 2518 (1975)	5	5	14	14
Prices of Goods and Services Act, B.E. 2542 (1999)	26	24	26	24
Printing Recordation Act, B.E. 2550 (2007)	2	4	2	4
Protection and Promotion of Thai Traditional Medical Knowledge Act, B.E. 2542 (1999)	2	2	2	2
Psychotropic Substances Act, B.E. 2559 (2016)	19	20	29	32
Radio Communications Act, B.E. 2498 (1955)	31	32	46	50
Rice Trading Act, B.E. 2489 (1946)	1	1	2	2
Rubber Control Act, B.E. 2542 (1999)	3	3	10	10
State Administration Act, B.E. 2534 (1991)	1	1	5	5
Sugar cane and Granulated Sugar Act, B.E. 2527 (1984)	9	9	18	19
Thai Public Broadcasting Service Act, B.E. 2551 (2008)	1	1	2	1
Tobacco Product Control Act, B.E. 2560 (2017)	8	8	11	11
Vehicle Act, B.E. 2522 (1979)	4	4	4	4
Wild Animal Reservation and Protection Act, B.E. 2535 (1992)	2	3	8	10
Total	757	821	3,039	3,295

NTM = non-tariff measure.

Source: Authors, based on ERIA-UNCTAD (2019).